

System and Method for Electronic Inventory

Abstract

A system and method for conducting an inventory of tags, wherein each tag is assigned a Tag ID and a manufacturer number. Each tag can be attached to an item to take inventory of those items. A tag reader transmits a wake-up signal followed by at least one clock signal. Each tag increments a first tag count in response to the clock signals, and transmits the Tag ID assigned to the tag when the first tag count corresponds to the Tag ID assigned to the tag. The tag reader records the transmitted Tag IDs. When more than one tag transmits simultaneously, the tag stores the Tag ID in order to resolve the contention when the first read cycle is complete. In the second read cycle, the tag reader transmits the contended Tag ID followed by at least one clock signal. Each tag that contended for the transmitted Tag ID increments a second tag count in response to the clock signals, and transmits the manufacturer number assigned to the tag when the second tag count corresponds to the manufacturer number assigned to the tag. The tag reader records the transmitted Tag IDs, completing the inventory of the tags.